

The African species of Membracidae (Homoptera)
described by Gerstaecker and a new species
of *Otinotus* Buckton

by

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In 1873 Gerstaecker described two new species of *Centrotus* Fabricius, and for years it was thought that the types of these species, *fenestratus* and *pacificus*, had been lost. Fortunately they have recently been located in the Humboldt University Museum, East Berlin, and Dr U. Göllner-Scheiding has very kindly loaned them for study. They arrived just in time for me to comment on them and give their new combinations in a brief addendum to my paper on the African Centrotinae (Capener, 1968). It is considered desirable to present redescriptions and figures of both species.

In the past the genus *Centrotus* has been a clearinghouse for a wide range of species, and today most of those originally placed in this genus have been re-allocated to other genera. This is the case with the two species under review, for neither can be retained in *Centrotus*.

The species which Distant (1915) described as *Demanga deflectens* is now seen to be identical with Gerstaecker's *fenestratus* and is therefore a synonym. Distant's type was drawn and re-described while I was studying the collection at the British Museum in 1963, and the figures and description (which agree exactly with Gerstaecker's type of *fenestratus*) are presented here as *Bocchar fenestratus* (Gerstaecker).

As indicated by Capener (1968), the species *pacificus* Gerstaecker is transferred to *Otinotus* Buckton and is distinct from species subsequently described. It does not appear to have been found since it was first collected, but is very close indeed to the new species described here.

Bocchar fenestratus (Gerstaecker, 1873), figs. 1-3

Centrotus fenestratus Gerstaecker, 1873, *Reis. Ost. Afr.*: 429-30.

Demanga deflectens Distant, 1915, *Ann. Mag. nat. Hist.* (8) 16: 494.

Bocchar fenestratus (Gerstaecker), Capener, 1968, *Entomology Mem. Dep. agric. tech. serv. Repub. S. Afr.* 17: (124, addendum).

MALE: Head vertical; vertex twice as wide as long, shining black with rather large shallow puncturation, transversely convex, almost bare of pilosity, upper margin shallowly arcuate and sinuate, lower margins a little downwardly sloping and weakly convex to frontoclypeus; eyes sordid succineous, opaque; ocelli vitreously succineous, a little closer to each other than to eyes and situated about on centro-ocular line; frontoclypeus a little declivous, about as long as wide across lobes, extending about two-

thirds its length below lower margins of vertex, lobes prominently rounded and inwardly a little indented, about two-thirds length of frontoclypeus, margins of lobes and frontoclypeus continuously finely carinate, tip blunt and rounded; antennae brownish.

Thorax. Pronotum strongly convex and rather shallow, shining black with rather large puncturation and without pubescence, median carina almost obsolete, humeral angles prominent and rounded, posterior angles rounded, posterior margin transverse; metopidium low, convex and receding, supraocular callosities impunctate and somewhat obscure. Posterior process rising a little obliquely from disc and posterior margin, a little arcuate over scutellum and not impinging on it, tricarinate and rather slender, about uniform in thickness and gently downwardly sloping, apically acuminate to sharp tip which impinges on tegminal limbus about halfway along margin of fifth apical cell. Scutellum longer than wide, black and punctate, basally convex with a dense white tomentose cushion, tip slightly upturned, apically with a very narrow "V"-shaped notch. Tegmina three times as long as wide, uniformly amber hyaline with base narrowly black coriaceous and punctate, subbasal area pale amber coriaceous, punctate and translucent through which can be seen the whitely tomentous metanotum, veins shining brown shading to colour of membrane at apex, apical limbus moderately broad, tip rounded. Sides of thorax densely whitely tomentose. Legs dark brown, paler on tibiae and tarsi. Abdomen black with terminalia dark brown. Female similar to male.

Measurements in mm. Length: frontal margin to tips tegmina ♂ 6.93-7.72, ♀ 7.79-8.32; to tip posterior process ♂ 5.88-6.24, ♀ 6.15-7.00; width: at humeral angles ♂ 2.64-3.17, ♀ 3.10-3.30, at eyes ♂ 2.58-2.90, ♀ 2.84-2.97.

MATERIAL EXAMINED. Gerstaecker's type from Endara; Distant's type (*deflectens*) from Ruanda; Kenya: 5 ♂ 5 ♀, Meru, vii.1943; 1 ♂ 1 ♀, x.1948; 1 ♀, xii.1948; 1 ♂ 1 ♀, Nanyuki, v.1948; 1 ♀, Nairobi, vii.1930; 1 ♀, Karuri, vi.1936, 1 ♀, Nairobi, 1937, V. G. van Someren; 1 ♀, W. slopes of Mt. Kenya on Meru-Nyeri Rd., 6-8,000 ft, ii.1911, S.A. Neave; 1 ♂, Ngare Narok, 6,000 ft, xii.1913, A. O. Luckman.

Otinotus pacificus (Gerstaecker, 1873), figs. 4-6

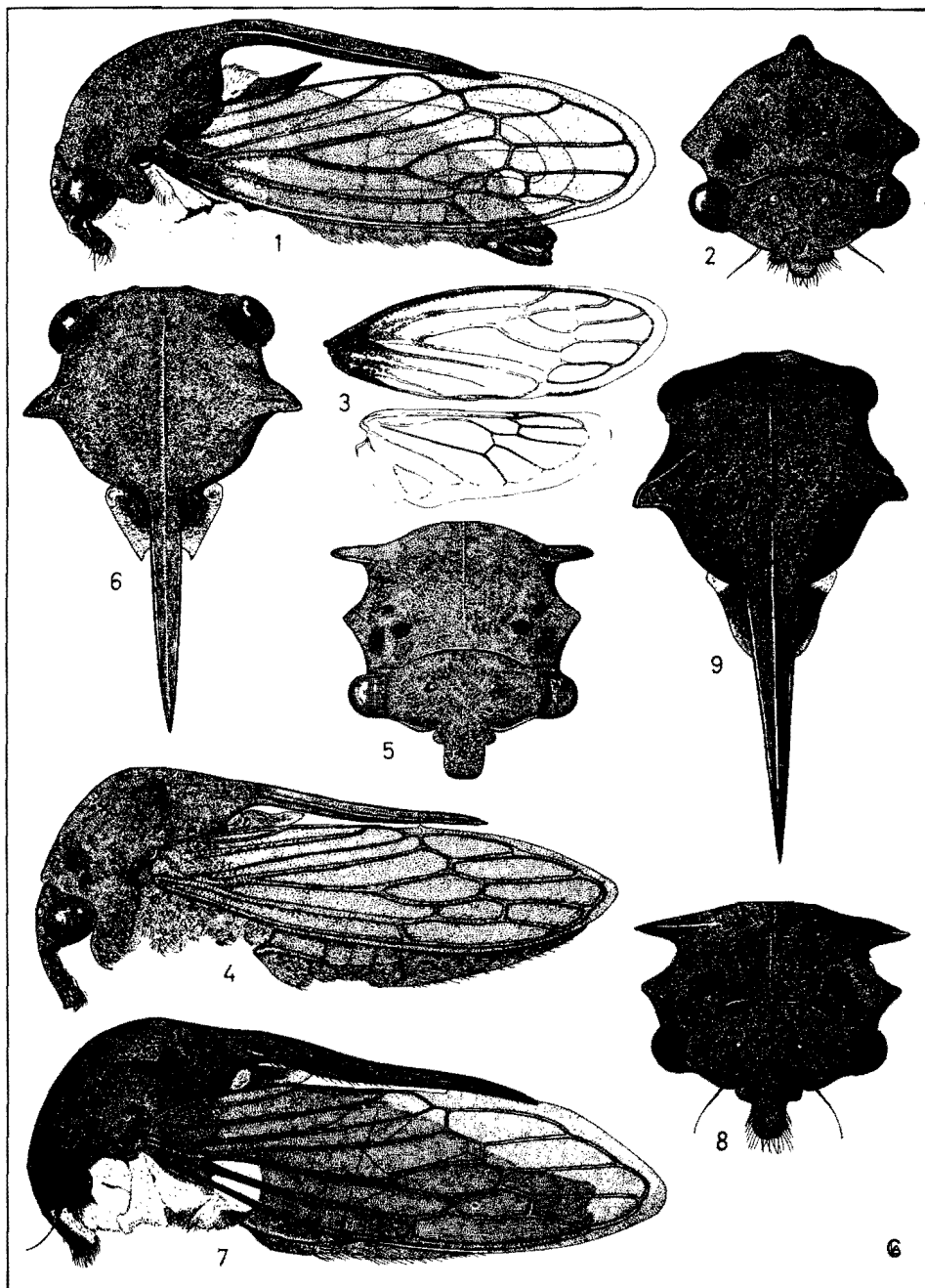
Centrotus pacificus Gerstaecker, 1873, *Reis. Ost. Afr.*: 430.

Otinotus pacificus (Gerstaecker), Capener, 1968, *Entomology Mem. Dep. agric. tech. Serv. Repub. S. Afr.* 17: 124.

FEMALE: Head vertical; vertex twice as wide as long, dark brown, punctate with recumbent pale golden hairs, weakly moulded with a slight depression laterally of each ocellus, upper margin shallowly arcuate and weakly sinuate, lower margins carinate and a little obliquely curved to frontoclypeus; eyes subhemispherical, sordid succineous mottled with black; ocelli succineous, about equidistant from each other and from eyes and situated about on centro-ocular line; frontoclypeus very slightly declivous, about as long as width across lobes which are prominent and extend about half its length, punctate and pilose with recumbent pale golden hairs, tip truncate, carinate and slightly upturned; antennae basally blackish, apical two-thirds of flagellum brownish ochraceous.

EXPLANATION OF FIGURES

1. *Bocchar fenestratus* (Gerst.) ♂ lateral; 2. *Bocchar fenestratus* (Gerst.) ♂ frontal; 3. *Bocchar fenestratus* (Gerst.) tegmen and wing; 4. *Otinotus pacificus* (Gerst.) ♀ lateral; 5. *Otinotus pacificus* (Gerst.) ♀ frontal; 6. *Otinotus pacificus* (Gerst.) ♀ dorsal; 7. *Otinotus tribulis* spec. nov. ♀ lateral; 8. *Otinotus tribulis* spec. nov. ♀ frontal; 9. *Otinotus tribulis* spec. nov. ♀ dorsal.



Thorax: Pronotum brown, punctate with short adpressed pale golden hairs, frontal margin not obumbrant, humeral angles prominent and blunt, posterior angles rounded, posterior margin shallowly arcuate over base of scutellum, median carina rather weakly percurrent; metopidium slightly receding into disc, convex, wider than high, supraocular callosities dark brown to blackish. Suprahumeral horns horizontal, directly above and extending slightly beyond humeral angles, triangular from dorsal aspect, compressed and somewhat wedge-shaped from lateral view with anterior carina forming apex, lateral carina close to and directly below posterior carina, anterior margin oblique, posterior margin about at right angles to median line, a vestigial carina on dorsal surface near posterior margin, all three surfaces planate, tip bluntly acute. Posterior process emerging horizontally from behind disc and posterior margin, tectiform, strongly tricarinate, just clear of scutellum and tegmina, very gradually acuminate, extending a little beyond anal angles of tegmina, tip sharp, ventral surface basally very weakly curved, apical half planate. Scutellum much wider than long, not basally swollen, basally dark brown shading to ochraceous at tip, basal angles with a tuft of somewhat dense sordid hairs, punctate with sordid hairs lying transversely, tip broadly emarginate, apices acute. Tegmina a little more than three times as long as wide, almost opaque (probably due to age and encrustation), veins brown, moderately broad and margined with short hairs, apical limbus rather narrow except at tip, basal sixth brownish coriaceous. Sides of thorax somewhat densely clothed with sordid hairs (probably white in fresh specimens) Legs brown, paler on tibiae and tarsi. Abdomen brown, darker on terminalia.

MALE unknown.

Measurements in mm. Length: frontal margin to tips of tegmina 8.05, to tip of posterior process 6.28; width across suprahumeral horns 4.00, at humeral angles 3.50, at eyes 3.30.

MATERIAL EXAMINED: ♀-Holotype from Mombas.

***Otinotus tribulis* spec. nov., figs. 7-9**

This species is very close to *pacificus* (Gerstaecker), structurally apparently differing only in the slightly more robust posterior process and slightly thicker suprahumeral horns. Its general black colour is a contrast to the brown of *pacificus*.

FEMALE: *Head* vertical; vertex twice as wide as long, black, weakly convex without moulding, finely punctate with very short recumbent golden hairs and a bare impunctate lunate callosity above each ocellus; upper margin shallowly arcuate and weakly sinuate, lower margins finely carinate, a little obliquely rounded to frontoclypeus; eyes subhemispherical, succineous to brownish, ocelli succineous, about equidistant from eyes and from each other and situated about on centro-ocular line; frontoclypeus, little declivous, extending about two-thirds its length below lower margins of vertex, about as wide across lobes as long, lobes prominent and extending about one-third its length, tip truncately rounded and weakly upturned, weakly carinate and longly pilose; antennae ochraceous to brownish; genae whitely tomentose or densely matted with pale golden hairs.

Thorax: Pronotum black, punctate with rather short recumbent pale golden hairs, frontal margin not obumbrant, humeral angles prominent and blunt, posterior

angles rounded, posterior margin shallowly arcuate over base of scutellum, median carina percurrent, metopidium about twice as wide as high, convexly inclining backwards, supraocular callosities impunctate and irregular. Suprahumeral horns horizontal, arising directly above and extending only slightly beyond humeral angles, dorsally triangular, in section somewhat wedge-shaped with anterior carina forming apex, lateral carina close to and directly below posterior carina, all surfaces about planate, very slightly swollen basally at base of anterior carina and behind posterior/lateral carinae. Scutellum wider than long, black shading laterally to reddish brown and apically to reddish ochraceous, punctate and transversely pilose with pale golden hairs, with a tuft of pale golden to whitish hairs at basal angles, tip broadly concavely emarginate, apices acute. Tegmina a little more than three times as long as wide, hyaline, basal sixth black shading to dark brown and paler inwardly, coriaceous with short golden hairs, veins dark brown becoming slightly paler towards apex, apical limbus moderately broad. Legs black with tarsi and apices of hind tibiae brownish ochraceous. Abdomen greyish and strongly punctate above, black with golden pilosity below and on terminalia.

MALE: Similar to female with suprahumeral horns a little more pointed and extending a little farther beyond humeral angles.

Measurements in mm. Length: frontal margin to tips of tegmina ♂ 7.26, ♀ 8.05-8.91; to tip of posterior process ♂ 5.48, ♀ 6.35-7.26; width across horns ♂ 3.56, ♀ 3.76-4.03, at humeral angles ♂ 2.90, ♀ 3.24-3.76, at eyes ♂ 2.77, ♀ 3.17-3.43.

Host Plant *Heteropyxis natalensis* Harv.

MATERIAL EXAMINED: ♀-Holotype, 1 ♂- and 13 ♀-paratypes from Kaap Muiden, E. Tvl., 27.v.1965, M. Hoffmann. Holotype and paratypes in National Collection of Insects, Pretoria. Paratypes will be sent to the British Museum (Nat. Hist.) and American Museum of Natural History.

REFERENCES

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 DISTANT, W. L. 1915. Rhynchotal Notes 57. *Ann. Mag. nat. Hist.* (8) **16**: 489-496.
 GERSTAECKER, C. E. A. 1873. Membraciden. In Decken, Claus von der Reisen in Ost-Afrika in den Jahren 1859-1863. **3**: 429-430.

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